

**Appendix V**

**Reduced Data for Pennsylvania Test Plot**

ORIGINAL PAGE IS  
OF POOR QUALITY

PENNSYLVANIA STATE COLD WEATHER DATA

MAY 7-8, 1980

TIME	SOIL	10CM SOIL	50CM SOIL	1.5M AIR	3.0M AIR	9.0M AIR	DEW POINT	WIND SPEED I
18.0	53.4	54.7	49.8	53.4	53.8	54.0	27.0	2.8
19.0	52.5	54.5	49.8	53.1	53.1	53.2	27.0	4.2
20.0	48.9	54.1	50.0	50.7	50.7	51.4	27.0	2.3
21.0	47.8	53.6	50.0	48.7	48.7	49.6	27.0	.3
22.0	44.2	53.1	49.8	46.6	46.0	47.8	27.0	.6
23.0	39.4	52.7	50.0	43.7	44.1	46.8	27.0	.2
0.0	37.6	52.0	50.0	40.8	40.1	43.5	27.0	.2
1.0	35.8	51.3	49.6	39.4	38.8	43.5	27.0	.2
2.0	34.7	50.7	49.8	34.0	34.2	37.8	27.0	.1
3.0	34.0	50.2	49.8	33.3	34.0	36.9	27.0	.1
4.0	33.4	49.6	49.8	31.5	32.0	34.5	26.0	.1
5.0	32.0	48.9	49.6	30.4	29.7	32.9	26.0	.1
6.0	31.6	48.6	49.8	27.7	31.1	33.3	26.0	.1
7.0	34.2	47.7	49.6	32.0	38.3	34.7	26.0	.1

PENNSYLVANIA STATE COLD WEATHER DATA

MAY 8-9, 1980

TIME	SOIL	10CM SOIL	50CM SOIL	1.5M AIR	3.0M AIR	9.0M AIR	DEW POINT	WIND SPEED
18.0	52.0	53.4	48.4	48.0	49.6	47.8	33.0	4.9
19.0	49.1	52.5	48.6	45.3	45.7	45.7	33.0	.8
20.0	44.8	52.2	48.7	44.1	44.1	45.0	33.0	1.1
21.0	41.0	51.8	48.9	41.9	40.8	43.2	33.0	.4
22.0	37.4	51.3	48.9	37.4	38.7	40.8	33.0	.1
23.0	36.3	50.4	48.9	38.8	36.3	39.9	33.0	.1
0.0	35.1	49.5	48.6	37.4	36.9	38.5	31.0	.2
1.0	34.0	49.3	48.7	35.4	36.0	38.1	29.0	.2
2.0	33.1	48.4	48.7	34.7	35.2	37.6	28.0	.4
3.0	32.4	48.0	48.6	32.2	33.4	36.3	27.0	.2
4.0	30.4	46.8	47.8	31.5	30.9	33.4	26.0	.1
5.0	34.9	46.4	48.0	32.5	32.7	34.7	30.0	.1
6.0	32.0	45.9	47.8	32.2	31.3	33.8	30.0	.1
7.0	39.0	46.0	48.6	34.5	35.6	36.3	30.0	.1

ORIGINAL PAGE IS  
OF POOR QUALITY

PENNSYLVANIA STATE COLD WEATHER DATA

MAY 9-10, 1980

TIME	SOIL	10CM SOIL	50CM SOIL	1.5M AIR	3.0M AIR	9.0M AIR	DEW POINT	WIND SPEED
18.0	60.4	52.3	47.8	53.6	56.3	53.4	30.0	2.5
19.0	50.2	52.2	47.8	52.0	56.3	53.4	30.0	2.9
20.0	42.8	51.6	47.8	46.4	46.8	49.3	30.0	.9
21.0	37.9	51.1	47.8	37.2	43.7	47.8	30.0	.3
22.0	35.8	50.5	48.0	39.6	40.5	47.1	30.0	.2
23.0	35.1	49.8	48.2	38.7	38.8	43.9	30.0	.2
0.0	33.8	49.3	48.2	33.6	36.7	40.3	30.0	.1
1.0	33.6	48.4	47.8	33.6	33.8	39.9	30.0	.1
2.0	32.5	47.8	47.8	34.5	33.1	37.4	30.0	.1
3.0	32.0	47.5	47.8	31.8	31.3	34.5	28.0	.1
4.0	31.6	46.8	48.0	32.5	31.6	34.0	27.0	.1
5.0	30.9	46.4	48.0	32.0	31.5	33.8	27.0	.1
6.0	30.9	45.7	47.8	32.0	31.8	34.5	27.0	.1
7.0	33.3	44.6	46.9	31.1	35.1	34.0	27.0	.1

PENNSYLVANIA STATE COLD WEATHER DATA

MAY 15-16, 1980

TIME	SOIL	10CM SOIL	50CM SOIL	1.5M AIR	3.0M AIR	9.0M AIR	DEW POINT	WIND SPEED
18.0	59.4	57.7	50.0	56.7	61.5	56.7	35.0	1.4
19.0	56.7	57.0	50.0	55.9	60.8	56.1	35.0	.4
20.0	51.8	56.7	50.4	51.4	51.4	53.6	35.0	.1
21.0	46.8	55.9	50.4	43.0	45.0	50.5	35.0	.1
22.0	44.6	55.0	50.4	43.0	45.0	50.5	35.0	.1
23.0	43.2	54.1	50.4	36.9	40.6	43.5	35.0	.1
0.0	42.0	53.2	50.4	35.6	38.1	41.5	35.0	.1
1.0	40.6	52.5	50.4	34.5	37.6	40.5	35.0	.1
2.0	40.6	52.0	50.5	38.1	37.4	41.2	34.0	.1
3.0	39.7	51.8	51.1	34.7	34.5	36.9	32.0	.1
4.0	39.2	51.1	51.1	33.6	34.7	37.2	32.0	.1
5.0	38.3	50.5	51.1	32.0	34.9	37.0	31.0	.1
6.0	37.8	49.8	51.1	33.3	32.7	35.4	31.0	.1
7.0	40.6	49.3	50.9	35.6	44.6	36.3	31.0	.1

## **Appendix VI**

### **P-Model Analysis Results**

**Table 6.1 P-Model Error Analysis (Total)**

**Table 6.2 P-Model Analysis by Night**

**Table 6.3 P-Model Analysis by Prediction Period**

**Table 6.4 P-Model Error Analysis**

**Figure 6.1 P-Model Predictions (Without Error Analysis)**

**Figure 6.2 P-Model Predictions (With Error Analysis)**

ORIGINAL PAGE IS  
OF POOR QUALITY

Table 6.1 P-Model Error Analysis (Total)

---

P-MODEL ERROR ANALYSIS

PENNSYLVANIA STATE COLD WEATHER DATA

---

ALL NIGHTS - MAY 7-8, 8-9, 9-10, 15-16, 1980

---

POPULATION = 264  
MEAN ERROR = .568  
STND. DEV. = 4.117

ORIGINAL PAGE IS  
OF POOR QUALITY

Table 6.2 P-Model Analysis by Night

P-MODEL ANALYSIS BY NIGHT

ERROR ANALYSIS OF MAY 7-8, 1980

POPULATION = 66  
MEAN ERROR = .333  
STND. DEV. = 4.417

ERROR ANALYSIS OF MAY 8-9, 1980

POPULATION = 66  
MEAN ERROR = -.712  
STND. DEV. = 2.826

ERROR ANALYSIS OF MAY 9-10, 1980

POPULATION = 66  
MEAN ERROR = -.280  
STND. DEV. = 3.519

ERROR ANALYSIS OF MAY 15-16, 1980

POPULATION = 66  
MEAN ERROR = .018  
STND. DEV. = 4.270

ORIGINAL PAGE IS  
OF POOR QUALITY

Table 6.3 P-Model Analysis by Prediction Periods

P-MODEL ERROR ANALYSIS BY PREDICTION PERIODS

ERROR ANALYSIS OF 1-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 44  
MEAN ERROR = -.300  
STND. DEV. = 2.749

ERROR ANALYSIS OF 2-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 40  
MEAN ERROR = -.250  
STND. DEV. = 2.921

ERROR ANALYSIS OF 3-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 36  
MEAN ERROR = -.020  
STND. DEV. = 3.474

ERROR ANALYSIS OF 4-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 32  
MEAN ERROR = .368  
STND. DEV. = 3.950

ERROR ANALYSIS OF 5-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 28  
MEAN ERROR = .682  
STND. DEV. = 4.248

ERROR ANALYSIS OF 6-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 24  
MEAN ERROR = .824  
STND. DEV. = 4.449

ERROR ANALYSIS OF 7-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 20  
MEAN ERROR = 1.447  
STND. DEV. = 5.099

24  
ORIGINAL PAGE IS  
OF POOR QUALITY

Table 6.3 (Continued)

ERROR ANALYSIS OF 8-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 16  
MEAN ERROR = 1.977  
STND. DEV. = 5.495

ERROR ANALYSIS OF 9-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 12  
MEAN ERROR = 2.179  
STND. DEV. = 6.262

ERROR ANALYSIS OF 10-HOUR PREDICTIONS (FOUR NIGHTS)

POPULATION = 8  
MEAN ERROR = 3.123  
STND. DEV. = 6.170

ORIGINAL PAGE IS  
OF POOR QUALITY

Table 6.4 P-Model Error Analysis

PHMDL ERROR ANALYSIS FOR MAY 7-8, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	49.4	48.2	47.2	46.2	45.3	44.4	43.5	42.8	42.0	41.3	40.7	
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9	
ERR	\$\$\$	\$\$\$	\$\$\$	.7	1.7	3.5	5.4	5.9	10.5	10.4	11.4	11.7	13.7	8.7	

MEAN OF ERRORS = 7.609

STD. DEV. OF ERRORS = 4.380

PHMDL ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$	\$\$\$	\$\$\$	42.5	41.2	40.0	38.9	37.9	37.0	36.2	35.4	34.7	34.0	33.4	
OBS	47.9	45.2	44.0	41.8	37.3	38.8	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4	
ERR	\$\$\$	\$\$\$	\$\$\$	.6	3.8	1.2	1.6	2.6	2.4	4.1	4.0	2.2	1.9	-1.1	

MEAN OF ERRORS = 2.126

STD. DEV. OF ERRORS = 1.555

PHMDL ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$	\$\$\$	\$\$\$	44.4	42.9	41.7	40.7	39.8	39.1	38.3	37.7	37.1	36.5	35.9	
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0	
ERR	\$\$\$	\$\$\$	\$\$\$	7.2	3.4	3.1	7.2	6.3	4.6	6.6	5.2	5.1	4.6	4.9	

MEAN OF ERRORS = 5.302

STD. DEV. OF ERRORS = 1.389

PHMDL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$	\$\$\$	\$\$\$	49.5	47.9	46.5	45.3	44.2	43.2	42.4	41.6	40.9	40.3	39.7	
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	38.0	34.6	33.5	31.9	33.2	35.5	
ERR	\$\$\$	\$\$\$	\$\$\$	6.5	5.0	9.7	9.7	9.8	5.2	7.8	8.1	9.0	7.1	4.2	

MEAN OF ERRORS = 7.457

STD. DEV. OF ERRORS = 2.036

ORIGINAL PAGE IS  
OF POOR QUALITY

## MODEL ERROR ANALYSIS FOR DAY 7-6, 1986

HOUR 1800 1900 2000 2100 2200 2300 0000 0100 0200 0300 0400 0500 0600 0700  
 BASE        \*\*     \*\*     \*\*  
 PRED \$\$\$\$ \$\$\$\$ \$\$\$\$ \$\$\$\$ 47.0 45.7 44.5 43.4 42.5 41.7 40.9 40.2 39.6 39.1  
 OES 53.3 53.0 50.6 48.7 46.5 43.6 40.7 39.3 33.9 33.2 31.4 30.3 27.6 31.9  
 EPR \$\$\$\$ \$\$\$\$ \$\$\$\$ \$\$\$\$ .5 2.5 3.7 4.1 6.6 8.5 9.5 9.9 12.0 7.1 --  
 MEAN OF ERRORS = 6.003  
 STD. DEV. OF ERRORS = 3.789

## PHODL ERROR ANALYSIS FOR MAY 8-9, 1980

PMODL ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700
BASE	**	**	**											
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	34.9	33.5	32.4	31.6	30.9	30.3	29.9	29.4	29.0	28.7
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-4.6	-5.1	-1.1	-2.0	-3.6	-1.4	-2.6	-2.5	-2.9	-2.3
MEAN OF ERRORS	= -2.810													
STD. DEV. OF ERRORS	= 1.278													

PHOTL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700
BASE	.	**	**	**										
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	40.2	38.2	36.7	35.5	34.6	33.8	33.1	32.5	32.0	31.5
OES	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	38.0	34.6	33.5	31.9	33.2	35.5
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-2.8	1.4	1.2	1.1	-3.5	.9	-.5	.5	-1.2	-4.0
MEAN OF ERRORS	= -.864													
STD. DEV. OF ERRORS	= 2.000													

ORIGINAL PAGE IS  
OF POOR QUALITY

PHGDL ERROR ANALYSIS FOR MAY 7-8, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700
BASE	**	**	**											
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	44.7	43.2	41.8	40.6	39.4	38.4	37.4	36.6	35.7
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	1.0	2.4	2.5	6.7	6.2	7.0	7.1	9.0	3.8

MEAN OF ERRORS = 5.086  
STD. DEV. OF ERRORS = 2.703

PHGDL ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700
BASE	**	**	**											
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	35.1	33.3	31.8	30.6	29.5	28.5	27.9	27.7	27.6
OBS	47.9	45.2	44.0	41.8	37.3	38.8	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-3.7	-4.0	-3.5	-4.0	-2.6	-2.9	-4.6	-4.4	-6.9

MEAN OF ERRORS = -4.066  
STD. DEV. OF ERRORS = 1.234

PHGDL ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700
BASE	**	**	**											
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	37.1	35.2	33.6	32.2	31.0	30.0	29.1	28.3	27.5
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-1.5	1.7	.1	-2.2	-7	-2.5	-2.8	-3.7	-3.5

MEAN OF ERRORS = -1.684  
STD. DEV. OF ERRORS = 1.752

PHGDL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700
BASE	**	**	**											
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	40.5	38.7	37.3	36.1	35.1	34.2	33.5	32.8	32.2
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	38.0	34.6	33.5	31.9	33.2	35.5
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	3.7	3.2	2.8	-2.0	.5	.7	1.6	-.4	-3.3

MEAN OF ERRORS = .754  
STD. DEV. OF ERRORS = 2.364

ORIGINAL PAGE IS  
OF POOR QUALITY

PHODL ERROR ANALYSIS FOR MAY 7-8, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	41.5	39.7	38.2	36.8	35.5	34.3	33.3	32.3
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	.7	.4	4.3	3.6	4.1	4.0	5.7	.4

MEAN OF ERRORS = 2.897

STD. DEV. OF ERRORS = 2.070

PHODL ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	37.2	36.1	35.0	33.9	33.0	32.1	31.3	30.5
OBS	47.9	45.2	44.0	41.8	37.3	38.8	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-.1	.7	.3	1.8	1.6	-.4	-.8	-3.9

MEAN OF ERRORS = -.093

STD. DEV. OF ERRORS = 1.804

PHODL ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	37.8	37.2	36.7	36.2	35.7	35.2	34.8	34.3
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	4.2	3.7	2.3	4.5	3.2	3.3	2.8	3.3

MEAN OF ERRORS = 3.416

STD. DEV. OF ERRORS = .713

PHODL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE	**	**	**												
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	34.7	33.2	32.0	31.1	30.6	30.2	30.0	29.8
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	38.0	34.6	33.5	31.9	33.2	35.5	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-.8	-1.2	-6.1	-3.5	-2.9	-1.7	-3.2	-5.7

MEAN OF ERRORS = -3.140

STD. DEV. OF ERRORS = 1.954

## PMDL ERROR ANALYSIS FOR MAY 7-8, 1980

ORIGINAL PAGE IS  
OF POOR QUALITY

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE					**	**	**								
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	38.4	36.6	35.1	33.7	32.5	31.4	30.4
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-9	2.7	1.9	2.3	2.2	3.8	-1.5

MEAN OF ERRORS = 1.505  
 STD. DEV. OF ERRORS = 1.951

## PMDL ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	36.4	35.8	35.3	34.7	34.1	33.6	33.1
OBS	47.9	45.2	44.0	41.8	37.3	38.8	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	1.1	1.2	3.2	3.3	1.7	1.5	-1.4

MEAN OF ERRORS = 1.509  
 STD. DEV. OF ERRORS = 1.553

## PMDL ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE									**	**	**				
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	31.6	30.2	29.1	28.1	27.2	26.4	25.8
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-2.0	-4.2	-2.7	-4.4	-4.7	-5.5	-5.2

MEAN OF ERRORS = -4.111  
 STD. DEV. OF ERRORS = 1.314

## PMDL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE									**	**	**				
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	33.3	31.7	30.7	30.0	29.6	29.4	29.2
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	36.0	34.6	33.5	31.9	33.2	35.5	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-1.1	-6.3	-4.0	-3.5	-2.3	-3.8	-6.3

MEAN OF ERRORS = -3.901  
 STD. DEV. OF ERRORS = 1.918

## PMDL ERROR ANALYSIS FOR MAY 7-8, 1980

ORIGINAL PAGE IS  
OF POOR QUALITY

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	37.3	35.8	34.5	33.3	32.2	31.2
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	3.4	2.6	3.1	3.0	4.6	-.7

MEAN OF ERRORS = 2.664

STD. DEV. OF ERRORS = 1.791

## PMDL ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	33.7	32.5	31.5	30.5	29.6	28.8
OBS	47.9	45.2	44.0	41.8	37.3	38.8	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-.9	.4	.1	-2.0	-2.5	-5.6

MEAN OF ERRORS = -1.753

STD. DEV. OF ERRORS = 2.199

## PMDL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	33.3	32.7	32.2	31.8	31.5	31.3
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	38.0	34.6	33.5	31.9	33.2	35.5	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-4.7	-2.0	-1.4	-.1	-1.7	-4.3

MEAN OF ERRORS = -2.353

STD. DEV. OF ERRORS = 1.789

ORIGINAL PAGE IS  
OF POOR QUALITY

PHODL ERROR ANALYSIS FOR MAY 7-8, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	31.6	30.1	28.8	27.7	26.8
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-1.6	-1.3	-1.5	.1	-5.2

MEAN OF ERRORS = -1.895  
STD. DEV. OF ERRORS = 1.951

PHODL ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	33.1	32.1	31.2	30.3	29.6
OBS	47.9	45.2	44.0	41.8	37.3	38.8	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	1.0	.7	-1.3	-1.8	-4.9

MEAN OF ERRORS = -1.228  
STD. DEV. OF ERRORS = 2.381

PHODL ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	33.5	33.0	32.5	32.0	31.5
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	1.8	.5	.5	.0	.4

MEAN OF ERRORS = .655  
STD. DEV. OF ERRORS = .653

PHODL ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE								**	**	**					
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	37.1	36.6	36.1	35.6	35.3
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	32.0	34.6	33.5	31.9	33.2	35.5	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	2.5	3.0	4.2	2.4	-.3

MEAN OF ERRORS = 2.372  
STD. DEV. OF ERRORS = 1.632

ORIGINAL PAGE IS  
OF POOR QUALITY

PHOENIX ERROR ANALYSIS FOR MAY 7-8, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE									**	**	**				
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	31.0	29.6	28.5	27.5
OBS	53.3	53.0	50.6	48.7	46.5	43.6	40.7	39.3	33.9	33.2	31.4	30.3	27.6	31.9	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-3	-7	.8	-4.5

MEAN OF ERRORS = -1.161  
STD. DEV. OF ERRORS = 2.304

PHOENIX ERROR ANALYSIS FOR MAY 8-9, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE									**	**	**				
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	30.5	29.4	28.5	27.7
OBS	47.9	45.2	44.0	41.8	37.3	38.6	37.3	35.3	34.6	32.1	31.4	32.5	32.1	34.4	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-9	-3.0	-3.6	-6.8

MEAN OF ERRORS = -3.580  
STD. DEV. OF ERRORS = 2.430

PHOENIX ERROR ANALYSIS FOR MAY 9-10, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE									**	**	**				
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	30.6	29.9	29.2	28.6
OBS	53.5	51.9	46.3	37.1	39.5	38.6	33.5	33.5	34.4	31.7	32.5	31.9	31.9	31.0	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	-1.9	-2.1	-2.7	-2.4

MEAN OF ERRORS = -2.265  
STD. DEV. OF ERRORS = .361

PHOENIX ERROR ANALYSIS FOR MAY 15-16, 1980

HOUR	1800	1900	2000	2100	2200	2300	0000	0100	0200	0300	0400	0500	0600	0700	
BASE									**	**	**				
PRED	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	33.7	33.1	32.6	32.2
OBS	56.6	55.9	51.4	42.9	42.9	36.8	35.5	34.4	38.0	34.6	33.5	31.9	33.2	35.5	
ERR	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	.1	1.2	-.6	-3.4

MEAN OF ERRORS = -.655  
STD. DEV. OF ERRORS = 1.951

Figure 6.1.1

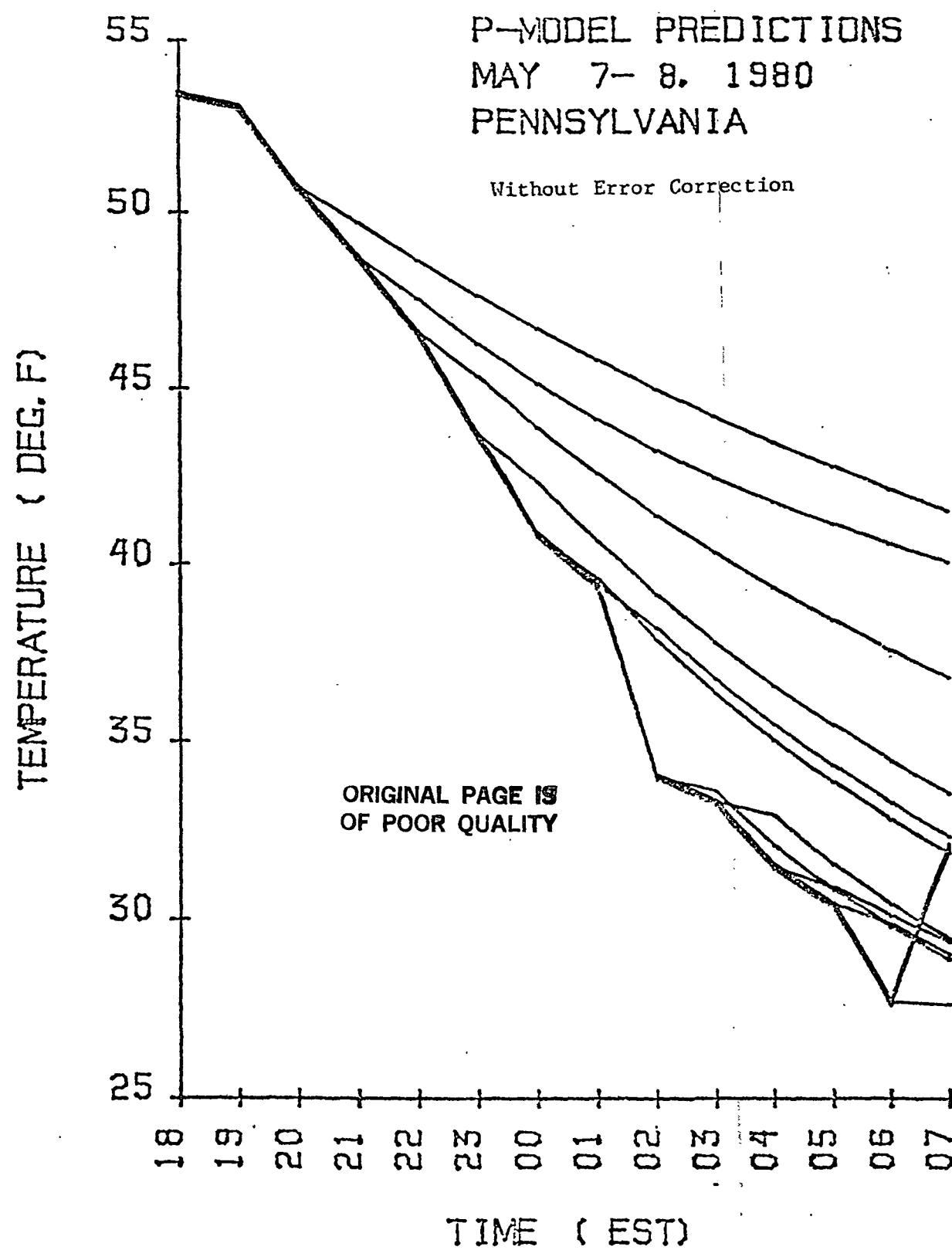


Figure 6.1.2

P-MODEL PREDICTIONS  
MAY 8-9, 1980  
PENNSYLVANIA

Without Error Correction

ORIGINAL PAGE IS  
OF POOR QUALITY

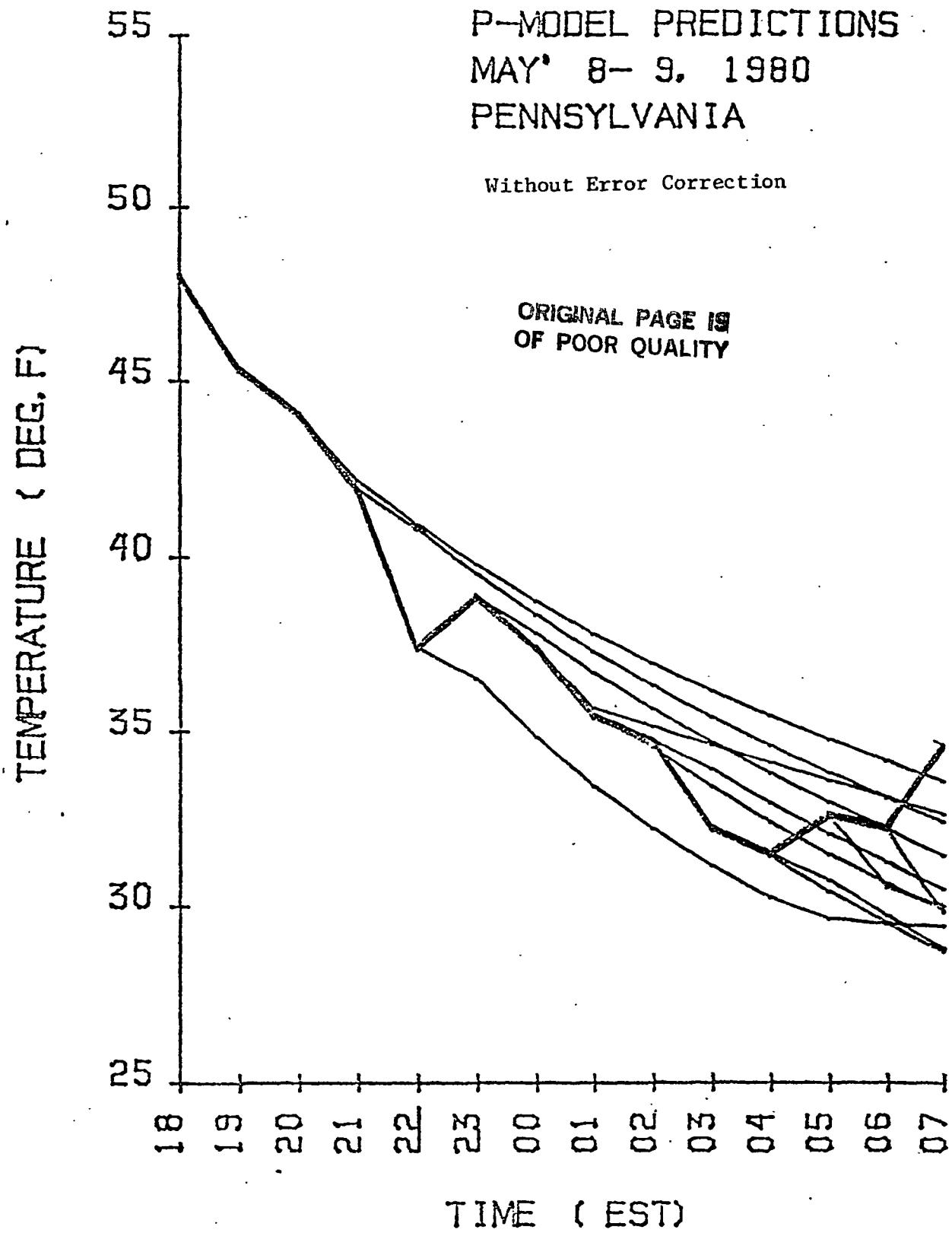


Figure 6.1.3

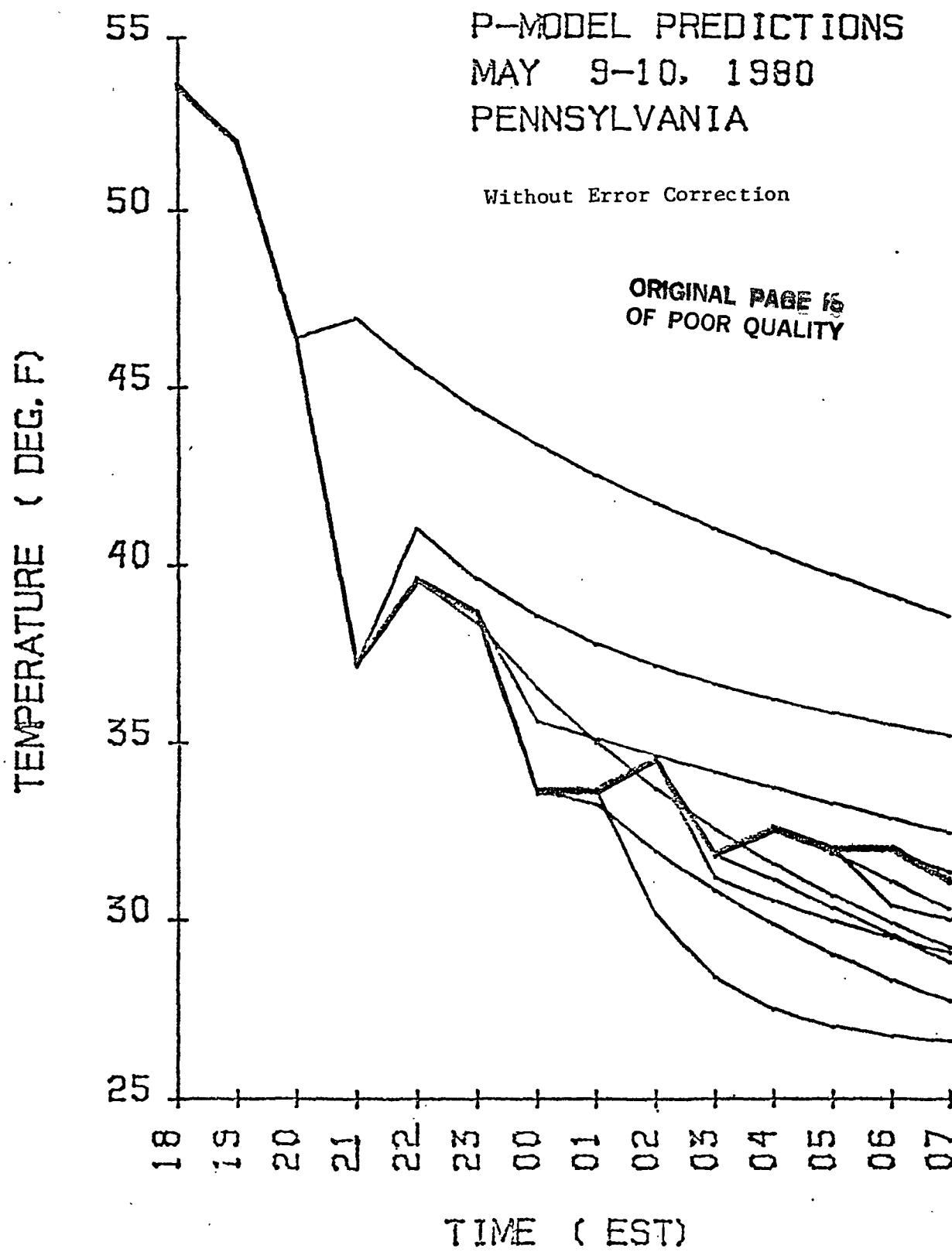


Figure 6.1.4

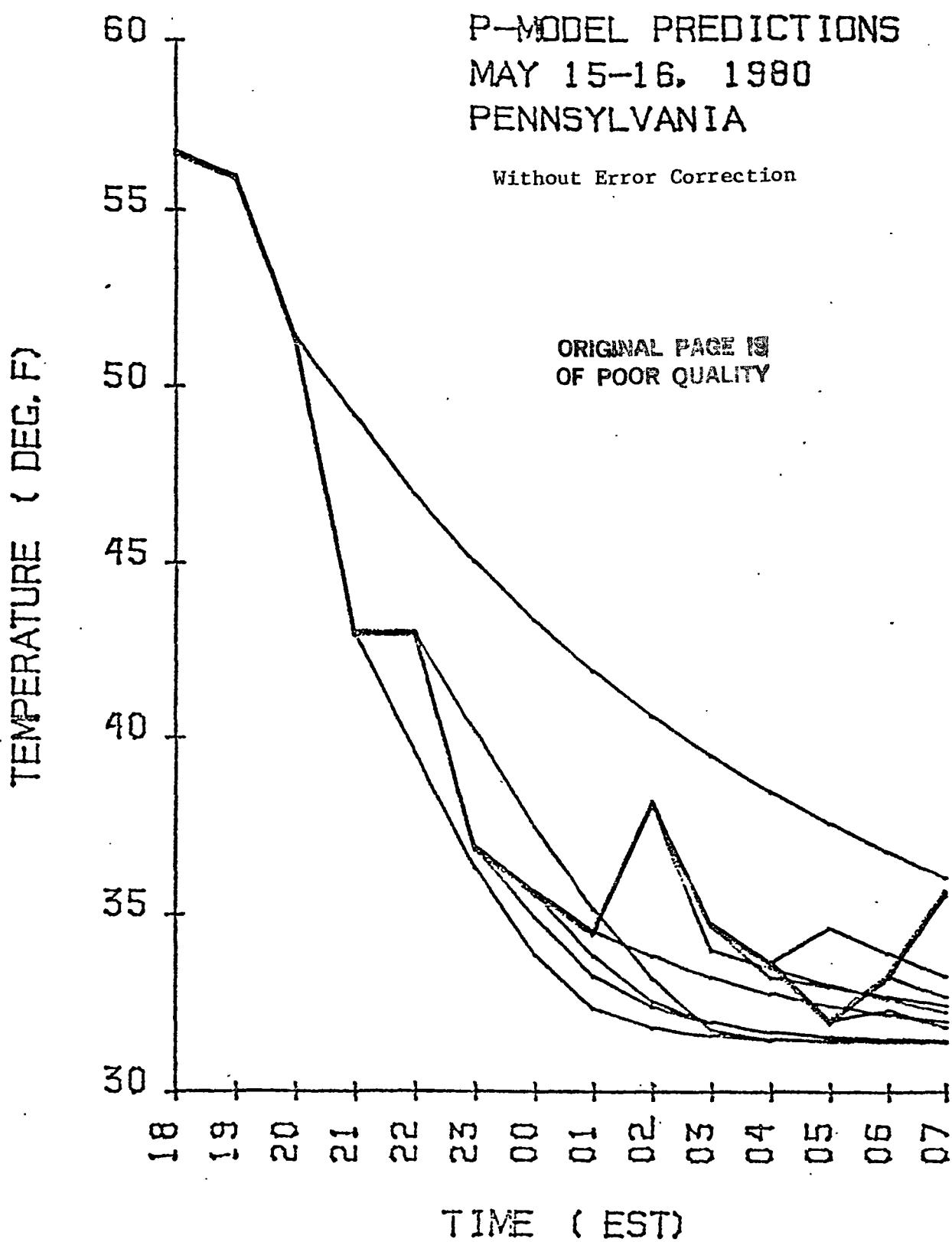


Figure 6.2.1

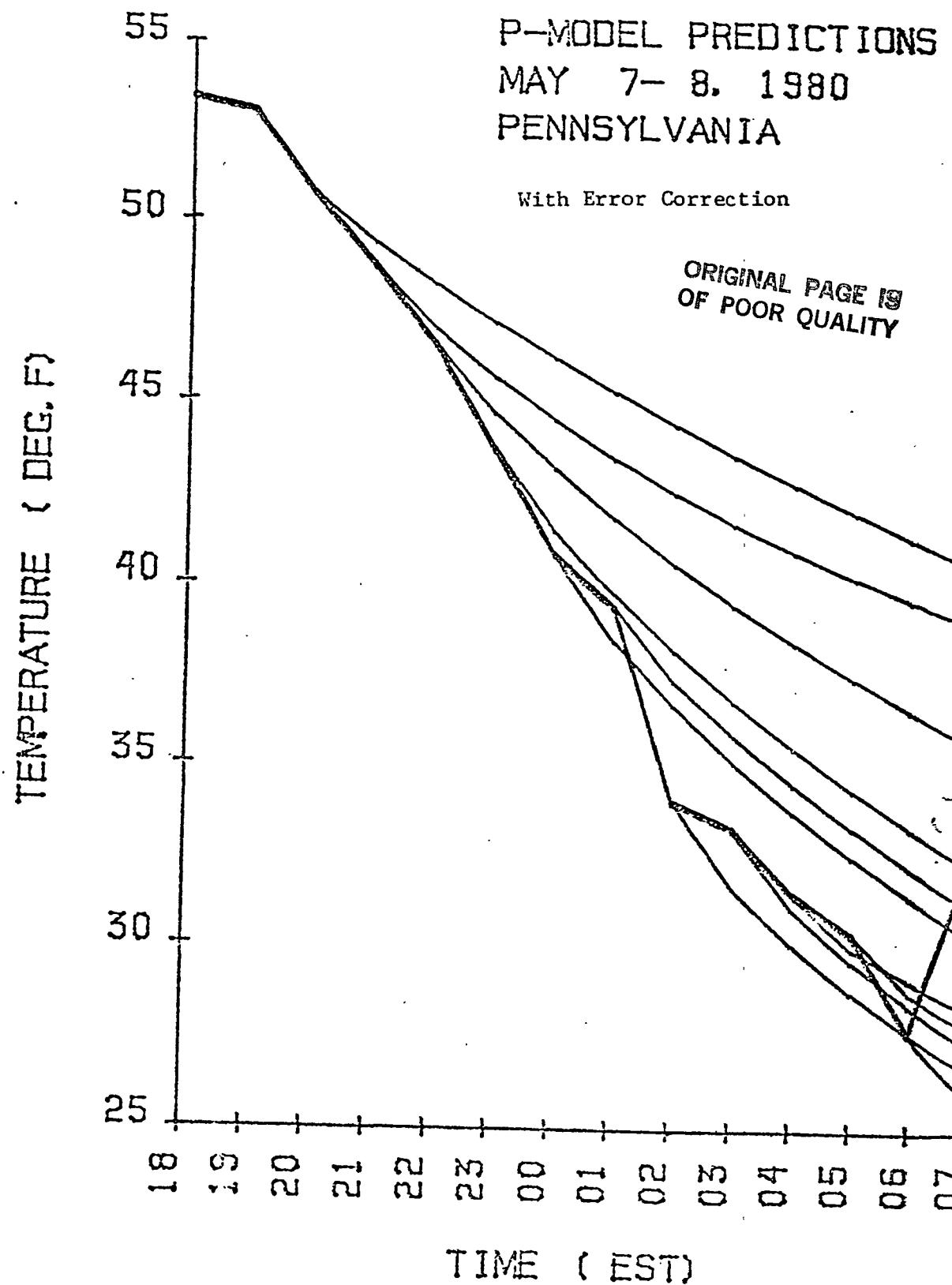


Figure 6.2.2

P-MODEL PREDICTIONS  
MAY 8-9, 1980  
PENNSYLVANIA

With Error Correction

ORIGINAL PAGE IS  
OF POOR QUALITY

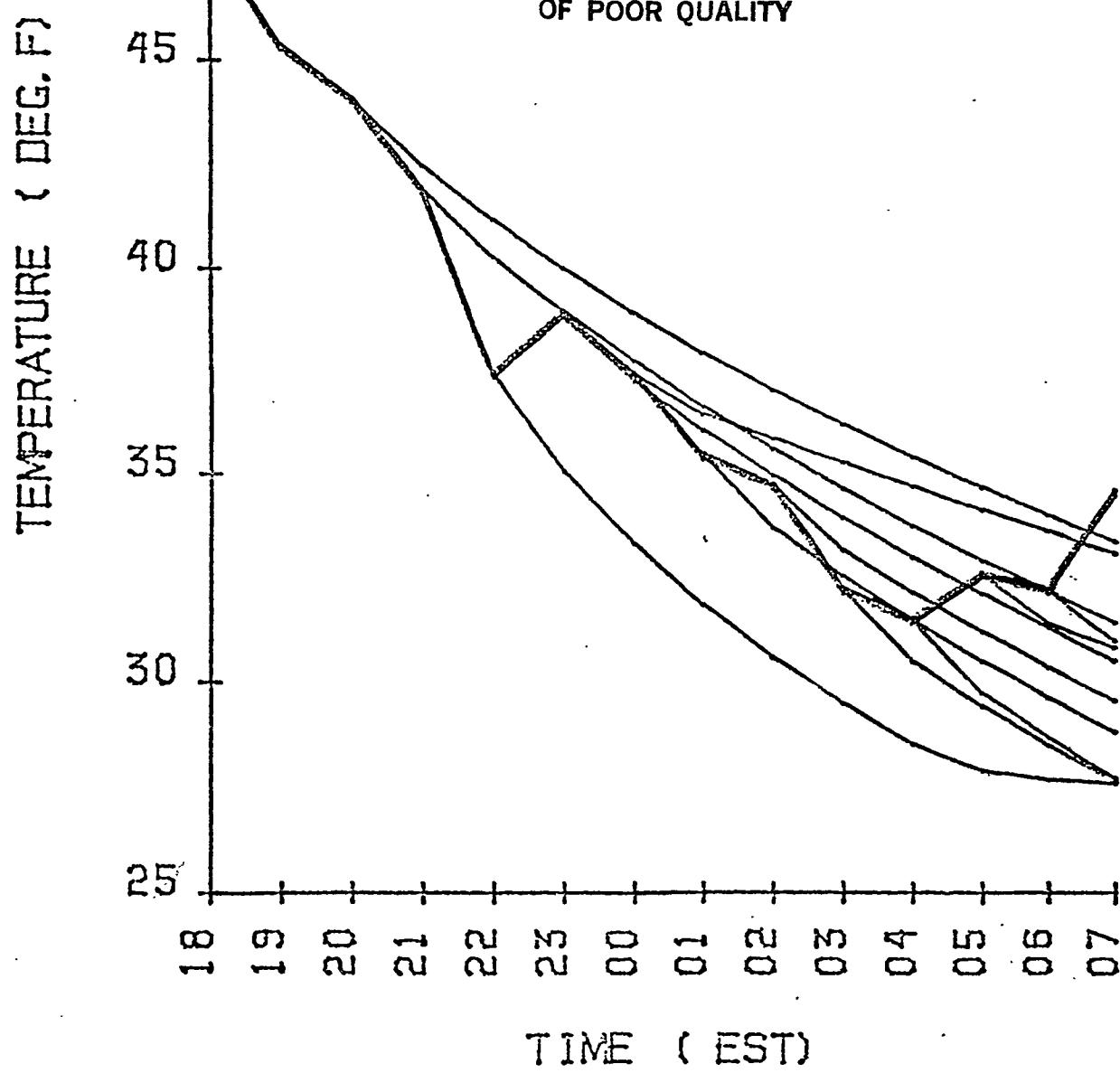


Figure 6.2.3

**ORIGINAL PAGE IS  
OF POOR QUALITY**

P-MODEL PREDICTIONS  
MAY 9-10, 1980  
PENNSYLVANIA

### With Error Correction

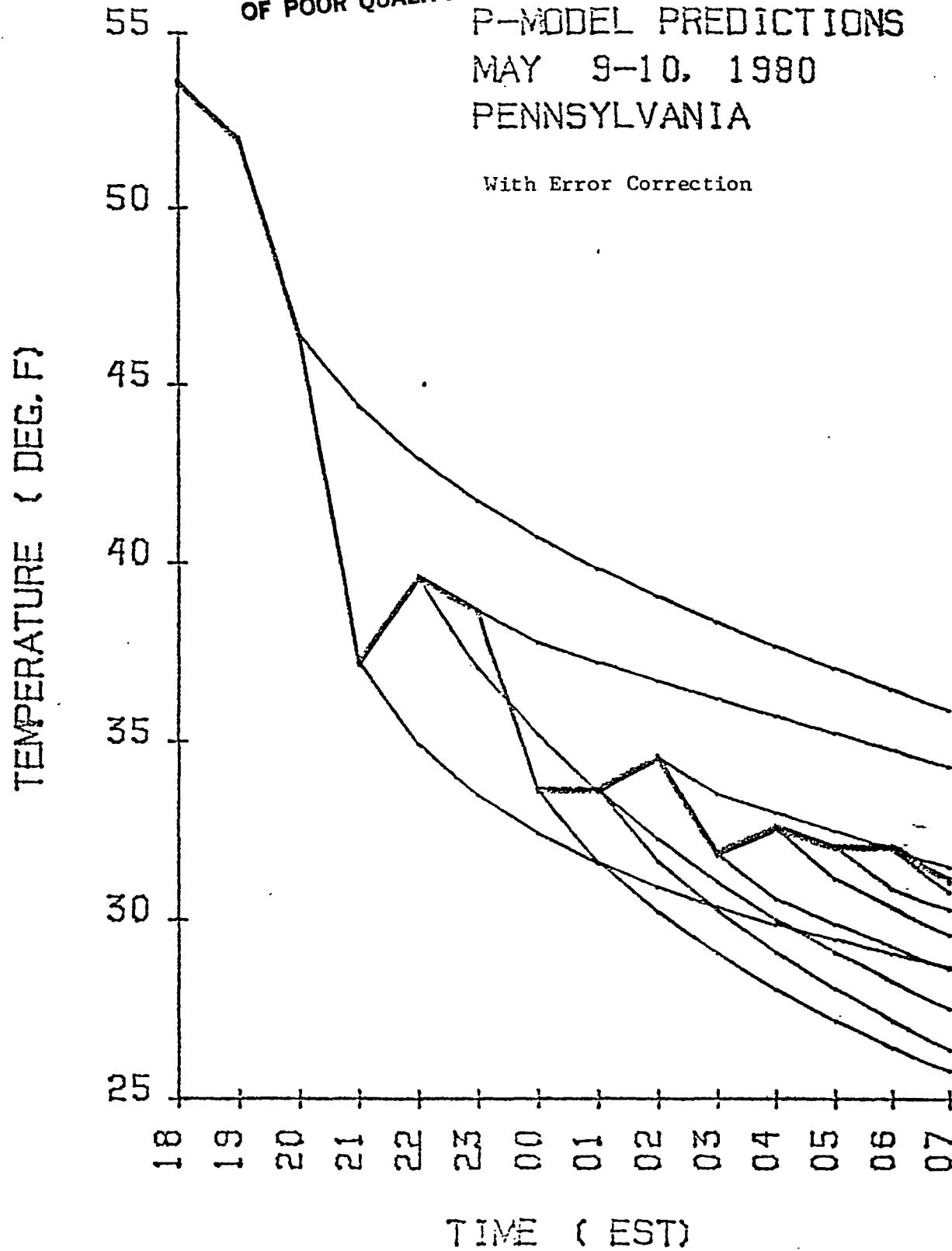


Figure 6.2.4

HP HEWLETT PACKARD

